

AMENDMENTS TO THE SPECIFICATION:

Please replace paragraph [0023] with the following amended paragraph:

[0023] In general, system 80 may be adapted to track, count, characterize and/or identify individual microparticles by obtaining multiple images of the fluid as it traverses through chamber 82 and measuring the intensities of light transmitted through the microparticles as they correspond to the respective images. As such, system 80 may include a photometer configured to measure the intensity of light transmitted through individual microparticles from light sources 88a and 88b. In addition, system 80 may include an imaging system configured to acquire images of the flowing fluid within chamber 82, such as a ~~couple capacitive discharge~~ charge-coupled device (CCD) imaging system. Such a photometer and imaging system are collectively illustrated in Fig. 4 as detector 96. In general, detector 96 may either represent the photometer and imaging system of system 80 as separate components or as integrated components of the same device, depending on the design specifications of the system. A more detailed description of how system 80 is adapted to track, count, characterize and/or identify individual microparticles through the use of detector 96 is described in more detail below in reference to Fig. 5.

Please replace paragraph [0031] with the following amended paragraph:

[0031] In some cases, CPU 98 may be configured to control the operation of light sources 88a and 88b such that the angle, position and/or wavelength of light transmitted to chamber 82 may be regulated. In addition, CPU 98 may be configured to control the movement of moveable mirror 92 in order to capture sequential images of the fluid passing through chamber 82. In some cases, CPU 98 may be used to control the flow rate of the fluid through chamber 82. In addition, CPU 98 may be configured to control detector 96 for capturing images of the fluid within chamber 82 as well as measuring the intensities of light transmitted through the microcapsules. Such operational control adaptations of CPU 98 may be incorporated within a storage medium of CPU 98 having

program instructions with which to regulate the operation of system 80 such that microparticles may be tracked, counted, characterized and/or identified in a flowing fluid. In particular, CPU 98 may include program instructions with which to control the operation of light sources 88a and 88b, moveable mirror 92, detector 96 and/or the flow rate of fluid through chamber 82 as described above.